

1. A transgenic mammal whose genome comprises a stably integrated transgenic nucleotide sequence encoding an FGF19 operably linked to a promoter.
2. The transgenic mammal of claim 1, wherein said mammal is a mouse.
3. The transgenic mammal of claim 1, wherein said FGF19 is expressed in skeletal muscle.
4. The transgenic mammal of claim 1, wherein said mammal acquires hepatic disease.
5. The transgenic mammal of claim 4, wherein said disease is hepatocellular carcinoma.
6. The transgenic mammal of claim 1, wherein said mammal serves as an animal model for the study and development of treatments for said hepatocellular carcinoma.
7. The transgenic mammal of claim 1, wherein said mammal has elevated levels of alpha-fetoprotein.
8. The transgenic mammal of claim 1, wherein said mammal exhibits increased proliferation of pericentral hepatocytes as compared with a control, non-transgenic mammal.
9. An isolated cell from the mammal of claim 1, wherein said cell expresses said FGF19.
10. A method for screening for biologically active agents that modulate a phenomenon associated with hepatocellular carcinoma, the method comprising:  
combining a candidate agent with a transgenic mammal having a genome comprising a stably integrated transgene encoding FGF19 operably linked to a promoter, wherein said transgene results in said mammal acquiring hepatocellular carcinoma; and  
determining the effect of said agent on the hepatocellular carcinoma of said mammal.
11. A method for screening for biologically active agents that modulate a phenomenon associated with hepatocellular carcinoma, the method comprising:  
combining a candidate agent with a transgenic mammal cell culture, each cell of said culture comprising a stably integrated transgene encoding FGF19 operably linked to a promoter, wherein said transgene results in said mammal acquiring hepatocellular carcinoma; and  
determining the effect of said agent on the transgenic mammal cell culture.
12. An isolated antibody that binds to a polypeptide having at least 80% amino acid sequence identity to:

- (a) the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;
- (d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or
- (f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

13. An isolated antibody that binds to a polypeptide having:

- (a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);
- (b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;
- (c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;
- (d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;
- (e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or
- (f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2)

14. The antibody of Claim 12 or 13 which is a monoclonal antibody.

15. The antibody of Claim 12 or 13 which is an antibody fragment.

16. The antibody of Claim 12 or 13 which is a chimeric or a humanized antibody.

17. The antibody of Claim 12 or 13 which is conjugated to a growth inhibitory agent.

18. The antibody of Claim 12 or 13 which is conjugated to a cytotoxic agent.

19. The antibody of Claim 18, wherein the cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

20. The antibody of Claim 18, wherein the cytotoxic agent is a toxin.

21. The antibody of Claim 20, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

22. The antibody of Claim 20, wherein the toxin is a maytansinoid.

23. The antibody of Claim 12 or 13 which is produced in bacteria.

24. The antibody of Claim 12 or 13 which is produced in CHO cells.

25. The antibody of Claim 12 or 13 which induces death of a cell to which it binds.

26. The antibody of Claim 12 or 13 which is detectably labeled.

27. An isolated nucleic acid having a nucleotide sequence that encodes the antibody of Claim 12 or 13.

28. An expression vector comprising the nucleic acid of Claim 27 operably linked to control sequences recognized by a host cell transformed with the vector.

29. A host cell comprising the expression vector of Claim 28.

30. The host cell of Claim 29 which is a CHO cell, an *E. coli* cell or a yeast cell.

31. A process for producing an antibody comprising culturing the host cell of Claim 29 under conditions suitable for expression of said antibody and recovering said antibody from the cell culture.

32. An isolated oligopeptide that binds to a polypeptide having at least 80% amino acid sequence identity to:

(a) the polypeptide shown in Figure 2 (SEQ ID NO:2);

(b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;

(d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

33. An isolated oligopeptide that binds to a polypeptide having:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);

(b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;

(d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

34. The oligopeptide of Claim 32 or 33 which is conjugated to a growth inhibitory agent.

35. The oligopeptide of Claim 32 or 33 which is conjugated to a cytotoxic agent.

36. The oligopeptide of Claim 35, wherein the cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

37. The oligopeptide of Claim 35, wherein the cytotoxic agent is a toxin.

38. The oligopeptide of Claim 37, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

39. The oligopeptide of Claim 37, wherein the toxin is a maytansinoid.

40. The oligopeptide of Claim 32 or 33 which induces death of a cell to which it binds.

41. The oligopeptide of Claim 32 or 33 which is detectably labeled.

42. A TAT binding organic molecule that binds to a polypeptide having at least 80% amino acid sequence identity to:

- (a) the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;
- (d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or
- (f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

43. The organic molecule of Claim 42 that binds to a polypeptide having:

- (a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);
- (b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;
- (c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;
- (d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;
- (e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or
- (f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

44. The organic molecule of Claim 42 or 43 which is conjugated to a growth inhibitory agent.

45. The organic molecule of Claim 42 or 43 which is conjugated to a cytotoxic agent.

46. The organic molecule of Claim 45, wherein the cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

47. The organic molecule of Claim 45, wherein the cytotoxic agent is a toxin.

48. The organic molecule of Claim 47, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

49. The organic molecule of Claim 47, wherein the toxin is a maytansinoid.

50. The organic molecule of Claim 42 or 43 which induces death of a cell to which it binds.

51. The organic molecule of Claim 42 or 43 which is detectably labeled.

52. A composition of matter comprising:

- (a) the antibody of Claim 12;
- (b) the antibody of Claim 13;
- (c) the oligopeptide of Claim 32;
- (d) the oligopeptide of Claim 33;
- (e) the TAT binding organic molecule of Claim 42; or
- (f) the TAT binding organic molecule of Claim 43; in combination with a carrier.

53. The composition of matter of Claim 52, wherein said carrier is a pharmaceutically acceptable carrier.

54. An article of manufacture comprising:

- (a) a container; and
- (b) the composition of matter of Claim 52 contained within said container.

55. The article of manufacture of Claim 54 further comprising a label affixed to said container, or a package insert included with said container, referring to the use of said composition of matter for the therapeutic treatment of or the diagnostic detection of a cancer.

56. A method of inhibiting the growth of a cell that expresses a protein having at least 80% amino acid sequence identity to:

- (a) the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;
- (d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or
- (f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), said method comprising contacting said cell with an antibody, oligopeptide or organic molecule that binds to said protein, the binding of said antibody, oligopeptide or organic molecule to said protein thereby causing an inhibition of growth of said cell.

57. The method of Claim 56, wherein said antibody is a monoclonal antibody.

58. The method of Claim 56, wherein said antibody is an antibody fragment.

59. The method of Claim 56, wherein said antibody is a chimeric or a humanized antibody.

60. The method of Claim 56, wherein said antibody, oligopeptide or organic molecule is conjugated to a growth inhibitory agent.

61. The method of Claim 56, wherein said antibody, oligopeptide or organic molecule is conjugated to a cytotoxic agent.

62. The method of Claim 61, wherein said cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

63. The method of Claim 61, wherein the cytotoxic agent is a toxin.

64. The method of Claim 63, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

65. The method of Claim 63, wherein the toxin is a maytansinoid.

66. The method of Claim 56, wherein said antibody is produced in bacteria.

67. The method of Claim 56, wherein said antibody is produced in CHO cells.

68. The method of Claim 56, wherein said cell is a cancer cell.

69. The method of Claim 68, wherein said cancer cell is further exposed to radiation treatment or a chemotherapeutic agent.

70. The method of Claim 68, wherein said cancer cell is selected from the group consisting of a breast cancer cell, a colorectal cancer cell, a lung cancer cell, an ovarian cancer cell, a central nervous system cancer cell, a liver cancer cell, a bladder cancer cell, a pancreatic cancer cell, a cervical cancer cell, a melanoma cell and a leukemia cell.

71. The method of Claim 68, wherein said protein is more abundantly expressed by said cancer cell as compared to a normal cell of the same tissue origin.

72. The method of Claim 56 which causes the death of said cell.

73. The method of Claim 56, wherein said protein has:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);

(b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;

(d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

74. A method of therapeutically treating a mammal having a cancerous tumor comprising cells that express a protein having at least 80% amino acid sequence identity to:

(a) the polypeptide shown in Figure 2 (SEQ ID NO:2);

(b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;

(d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), said method comprising administering to said mammal a therapeutically effective amount of an antibody, oligopeptide or organic molecule that binds to said protein, thereby effectively treating said mammal.

75. The method of Claim 74, wherein said antibody is a monoclonal antibody.

76. The method of Claim 74, wherein said antibody is an antibody fragment.

77. The method of Claim 74, wherein said antibody is a chimeric or a humanized antibody.

78. The method of Claim 74, wherein said antibody, oligopeptide or organic molecule is conjugated to a growth inhibitory agent.

79. The method of Claim 74, wherein said antibody, oligopeptide or organic molecule is conjugated to a cytotoxic agent.

80. The method of Claim 79, wherein said cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

81. The method of Claim 79, wherein the cytotoxic agent is a toxin.

82. The method of Claim 81, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

83. The method of Claim 81, wherein the toxin is a maytansinoid.

84. The method of Claim 74, wherein said antibody is produced in bacteria.

85. The method of Claim 74, wherein said antibody is produced in CHO cells.

86. The method of Claim 74, wherein said tumor is further exposed to radiation treatment or a chemotherapeutic agent.

87. The method of Claim 74, wherein said tumor is a breast tumor, a colorectal tumor, a lung tumor, an ovarian tumor, a central nervous system tumor, a liver tumor, a bladder tumor, a pancreatic tumor, or a cervical tumor.

88. The method of Claim 74, wherein said protein is more abundantly expressed by the cancerous cells of said tumor as compared to a normal cell of the same tissue origin.

89. The method of Claim 74, wherein said protein has:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);

(b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;

(d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

90. A method of determining the presence of a protein in a sample suspected of containing said protein, wherein said protein has at least 80% amino acid sequence identity to:

(a) the polypeptide shown in Figure 2 (SEQ ID NO:2);

(b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;

(d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), said method comprising exposing said sample to an antibody, oligopeptide or organic molecule that binds to said protein and determining binding of said antibody, oligopeptide or organic molecule

to said protein in said sample, wherein binding of the antibody, oligopeptide or organic molecule to said protein is indicative of the presence of said protein in said sample.

91. The method of Claim 90, wherein said sample comprises a cell suspected of expressing said protein.

92. The method of Claim 91, wherein said cell is a cancer cell.

93. The method of Claim 90, wherein said antibody, oligopeptide or organic molecule is detectably labeled.

94. The method of Claim 90, wherein said protein has:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);

(b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;

(d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

95. A method of diagnosing the presence of a tumor in a mammal, said method comprising determining the level of expression of a gene encoding a protein having at least 80% amino acid sequence identity to:

(a) the polypeptide shown in Figure 2 (SEQ ID NO:2);

(b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;

(d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), in a test sample of tissue cells obtained from said mammal and in a control sample of known normal cells of the same tissue origin, wherein a higher level of expression of said protein in the test sample, as compared to the control sample, is indicative of the presence of tumor in the mammal from which the test sample was obtained.

96. The method of Claim 95, wherein the step of determining the level of expression of a gene encoding said protein comprises employing an oligonucleotide in an *in situ* hybridization or RT-PCR analysis.

97. The method of Claim 95, wherein the step determining the level of expression of a gene encoding said protein comprises employing an antibody in an immunohistochemistry or Western blot analysis.

98. The method of Claim 95, wherein said protein has:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);

(b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;

(d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

99. A method of diagnosing the presence of a tumor in a mammal, said method comprising contacting a test sample of tissue cells obtained from said mammal with an antibody, oligopeptide or organic molecule that binds to a protein having at least 80% amino acid sequence identity to:

(a) the polypeptide shown in Figure 2 (SEQ ID NO:2);

(b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;

(d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), and detecting the formation of a complex between said antibody, oligopeptide or organic molecule and said protein in the test sample, wherein the formation of a complex is indicative of the presence of a tumor in said mammal.

100. The method of Claim 99, wherein said antibody, oligopeptide or organic molecule is detectably labeled.

101. The method of Claim 99, wherein said test sample of tissue cells is obtained from an individual suspected of having a cancerous tumor.

102. The method of Claim 99, wherein said protein has:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);

(b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;

(d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

103. A method for treating or preventing a cell proliferative disorder associated with increased expression or activity of a protein having at least 80% amino acid sequence identity to:

- (a) the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;
- (d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or
- (f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), said method comprising administering to a subject in need of such treatment an effective amount of an antagonist of said protein, thereby effectively treating or preventing said cell proliferative disorder.

104. The method of Claim 103, wherein said cell proliferative disorder is cancer.

105. The method of Claim 103, wherein said antagonist is an anti-TAT polypeptide antibody, TAT binding oligopeptide, TAT binding organic molecule or antisense oligonucleotide.

106. A method of binding an antibody, oligopeptide or organic molecule to a cell that expresses a protein having at least 80% amino acid sequence identity to:

- (a) the polypeptide shown in Figure 2 (SEQ ID NO:2);
- (b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;
- (d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;
- (e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or
- (f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), said method comprising contacting said cell with an antibody, oligopeptide or organic molecule that binds to said protein and allowing the binding of the antibody, oligopeptide or organic molecule to said protein to occur, thereby binding said antibody, oligopeptide or organic molecule to said cell.

107. The method of Claim 106, wherein said antibody is a monoclonal antibody.

108. The method of Claim 106, wherein said antibody is an antibody fragment.

109. The method of Claim 106, wherein said antibody is a chimeric or a humanized antibody.

110. The method of Claim 106, wherein said antibody, oligopeptide or organic molecule is conjugated to a growth inhibitory agent.

111. The method of Claim 106, wherein said antibody, oligopeptide or organic molecule is conjugated to a cytotoxic agent.

112. The method of Claim 111, wherein said cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

113. The method of Claim 111, wherein the cytotoxic agent is a toxin.

114. The method of Claim 113, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

115. The method of Claim 113, wherein the toxin is a maytansinoid.

116. The method of Claim 106, wherein said antibody is produced in bacteria.

117. The method of Claim 106, wherein said antibody is produced in CHO cells.

118. The method of Claim 106, wherein said cell is a cancer cell.

119. The method of Claim 118, wherein said cancer cell is further exposed to radiation treatment or a chemotherapeutic agent.

120. The method of Claim 118, wherein said cancer cell is selected from the group consisting of a breast cancer cell, a colorectal cancer cell, a lung cancer cell, an ovarian cancer cell, a central nervous system cancer cell, a liver cancer cell, a bladder cancer cell, a pancreatic cancer cell, a cervical cancer cell, a melanoma cell and a leukemia cell.

121. The method of Claim 120, wherein said protein is more abundantly expressed by said cancer cell as compared to a normal cell of the same tissue origin.

122. The method of Claim 106 which causes the death of said cell.

123. Use of a nucleic acid as in Claim 27 in the preparation of a medicament for the therapeutic treatment or diagnostic detection of a cancer.

124. Use of a nucleic acid as in Claim 27 in the preparation of a medicament for treating a tumor.

125. Use of a nucleic acid as in Claim 27 in the preparation of a medicament for treatment or prevention of a cell proliferative disorder.

126. Use of an expression vector as in Claim 28 in the preparation of a medicament for the therapeutic treatment or diagnostic detection of a cancer.

127. Use of an expression vector as in Claim 28 in the preparation of medicament for treating a tumor.

128. Use of an expression vector as in Claim 28 in the preparation of a medicament for treatment or prevention of a cell proliferative disorder.

129. Use of a host cell as in any of Claims 29 or 30 in the preparation of a medicament for the therapeutic treatment or diagnostic detection of a cancer.

130. Use of a host cell as in any of Claims 29 or 30 in the preparation of a medicament for treating a tumor.

131. Use of a host cell as in any of Claims 29 or 30 in the preparation of a medicament for treatment or prevention of a cell proliferative disorder.

132. Use of an antibody as claimed in any of Claims 12 to 26 in the preparation of a medicament for the therapeutic treatment or diagnostic detection of a cancer.

133. Use of an antibody as claimed in any of Claims 12 to 26 in the preparation of a medicament for treating a tumor.

134. Use of an antibody as claimed in any of Claims 12 to 26 in the preparation of a medicament for treatment or prevention of a cell proliferative disorder.

135. Use of an oligopeptide as claimed in any of Claims 32 to 41 in the preparation of a medicament for the therapeutic treatment or diagnostic detection of a cancer.

136. Use of an oligopeptide as claimed in any of Claims 32 to 41 in the preparation of a medicament for treating a tumor.

137. Use of an oligopeptide as claimed in any of Claims 32 to 41 in the preparation of a medicament for treatment or prevention of a cell proliferative disorder.

138. Use of a TAT binding organic molecule as claimed in any of Claims 42 to 51 in the preparation of a medicament for the therapeutic treatment or diagnostic detection of a cancer.

139. Use of a TAT binding organic molecule as claimed in any of Claims 42 to 51 in the preparation of a medicament for treating a tumor.

140. Use of a TAT binding organic molecule as claimed in any of Claims 42 to 51 in the preparation of a medicament for treatment or prevention of a cell proliferative disorder.

141. Use of a composition of matter as claimed in any of Claims 52 or 53 in the preparation of a medicament for the therapeutic treatment or diagnostic detection of a cancer.

142. Use of a composition of matter as claimed in any of Claims 52 or 53 in the preparation of a medicament for treating a tumor.

143. Use of a composition of matter as claimed in any of Claims 52 or 53 in the preparation of a medicament for treatment or prevention of a cell proliferative disorder.

144. Use of an article of manufacture as claimed in any of Claims 54 or 55 in the preparation of a medicament for the therapeutic treatment or diagnostic detection of a cancer.

145. Use of an article of manufacture as claimed in any of Claims 54 or 55 in the preparation of a medicament for treating a tumor.

146. Use of an article of manufacture as claimed in any of Claims 54 or 55 in the preparation of a medicament for treatment or prevention of a cell proliferative disorder.

147. A method for inhibiting the growth of a cell, wherein the growth of said cell is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to:

(a) the polypeptide shown in Figure 2 (SEQ ID NO:2);

(b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;

(d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), said method comprising contacting said protein with an antibody, oligopeptide or organic molecule that binds to said protein, thereby inhibiting the growth of said cell.

148. The method of Claim 147, wherein said cell is a cancer cell.

149. The method of Claim 147, wherein said protein is expressed by said cell.

150. The method of Claim 147, wherein the binding of said antibody, oligopeptide or organic molecule to said protein antagonizes a cell growth-potentiating activity of said protein.

151. The method of Claim 147, wherein the binding of said antibody, oligopeptide or organic molecule to said protein induces the death of said cell.

152. The method of Claim 147, wherein said antibody is a monoclonal antibody.

153. The method of Claim 147, wherein said antibody is an antibody fragment.

154. The method of Claim 147, wherein said antibody is a chimeric or a humanized antibody.

155. The method of Claim 147, wherein said antibody, oligopeptide or organic molecule is conjugated to a growth inhibitory agent.

156. The method of Claim 147, wherein said antibody, oligopeptide or organic molecule is conjugated to a cytotoxic agent.

157. The method of Claim 156, wherein said cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

158. The method of Claim 156, wherein the cytotoxic agent is a toxin.

159. The method of Claim 158, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

160. The method of Claim 158, wherein the toxin is a maytansinoid.

161. The method of Claim 147, wherein said antibody is produced in bacteria.

162. The method of Claim 147, wherein said antibody is produced in CHO cells.

163. The method of Claim 147, wherein said protein has:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);

(b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;

(d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).

164. A method of therapeutically treating a tumor in a mammal, wherein the growth of said tumor is at least in part dependent upon a growth potentiating effect of a protein having at least 80% amino acid sequence identity to:

(a) the polypeptide shown in Figure 2 (SEQ ID NO:2);

(b) the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(c) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide;

(d) an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide;

(e) a polypeptide encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or  
(f) a polypeptide encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2), said method comprising contacting said protein with an antibody, oligopeptide or organic molecule that binds to said protein, thereby effectively treating said tumor.

165. The method of Claim 164, wherein said protein is expressed by cells of said tumor.

166. The method of Claim 164, wherein the binding of said antibody, oligopeptide or organic molecule to said protein antagonizes a cell growth-potentiating activity of said protein.

167. The method of Claim 164, wherein said antibody is a monoclonal antibody.

168. The method of Claim 164, wherein said antibody is an antibody fragment.

169. The method of Claim 164, wherein said antibody is a chimeric or a humanized antibody.

170. The method of Claim 164, wherein said antibody, oligopeptide or organic molecule is conjugated to a growth inhibitory agent.

171. The method of Claim 164, wherein said antibody, oligopeptide or organic molecule is conjugated to a cytotoxic agent.

172. The method of Claim 171, wherein said cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

173. The method of Claim 171, wherein the cytotoxic agent is a toxin.

174. The method of Claim 173, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

175. The method of Claim 173, wherein the toxin is a maytansinoid.

176. The method of Claim 164, wherein said antibody is produced in bacteria.

177. The method of Claim 164, wherein said antibody is produced in CHO cells.

178. The method of Claim 164, wherein said protein has:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2);

(b) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(c) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), with its associated signal peptide sequence;

(d) an amino acid sequence of an extracellular domain of the polypeptide shown in Figure 2 (SEQ ID NO:2), lacking its associated signal peptide sequence;

(e) an amino acid sequence encoded by the nucleotide sequence shown in Figure 2 (SEQ ID NO:2); or

(f) an amino acid sequence encoded by the full-length coding region of the nucleotide sequence shown in Figure 2 (SEQ ID NO:2).